

**US-PAT-NO: 5134723**

**DOCUMENT-IDENTIFIER: US 5134723 A**

**TITLE: Radio Sensitivity enhancer**

**----- KWIC -----**

**Detailed Description Text - DETX (8):**

In the first receiver string 40, the mixer 52 adds the frequency of the desired signal from the antenna 44 with the frequency of the signal from the local oscillator 62. The local oscillator 62 is tuned so the sum of the frequency of the desired radio frequency signal from the antenna 44 and the frequency from the local oscillator 62 will be passed within the bandwidth selected by the intermediate frequency filter 54. The bandwidth of signals passed by the intermediate frequency filter 54, including the desired signal, are amplified by the intermediate frequency amplifier 56 and input to the product detector 58. The product detector 58 outputs a product or difference

**frequency of the intermediate frequency signal from the intermediate frequency amplifier 56 and the frequency signal of the beat frequency oscillator 64. By doing so, the product detector 58 converts the intermediate frequency signal from the intermediate frequency amplifier 56 into an audio signal which the product detector 58 outputs to the audio frequency amplifier 60.**

**Other Reference Publication - OREF (8):**

**Brochure-"Performance-Direct Digital Synthesis", 1989, Yaesu, USA ICOM  
IC-781 160- to 10-Meter Transceiver, Product Review, Jan. 1990, pp. 39-43 and p. 73.**